Cell Biology

MURINE IMMUNE RESPONSE CAN BE ENHANCED BY ANTIBACTERIAL ANTIBIOTICS.
Pashon Y. Dondle, Mia R. Goodman, Deborah R. Bush, Carina G. Dunlap, Robert C. Culbreath, Lena S. Flenoy, Sadegh Khazaeli* and Dennis J. Kitz*
Departments of Biological Sciences and Chemistry, Southern Illinois University Edwardsville, IL 62026 dkitz@siue.edu

Many antibacterial antibiotics have been found to have stimulatory effects on host immune response. We have looked at drugs from many different classes of antibiotics, recently including troleandomycin *Pfizer* and zyvox *Pfizer* and found that they both have some effects on immune response in murine assay systems. These assays include drugs influencing the killing of candidal yeast targets by neutrophils and macrophages, enhanced organ clearance of yeasts administered intravenously and enhanced contact sensitivity to DNFB mediated primarily by T cells and cell-mediated response. Variation was observed not only in the effects on contact sensitivity, but the drugs differ in their ability to influence DNBSO3 tolerance induction, also a T cell-mediated phenomenon in this murine assay model. Overall, the big picture is that these drugs have many effects on the host beyond directly targeting bacterial pathogens, potentially improving the prognosis of the patients receiving them. This work was supported in part by the Illinois LS-AMP Program and the Max Baer Heart Fund, Fraternal Order of Eagles (Granite City).